belief that the fusiform cell is specially engaged in the mediation of the sense of taste. The second type of cell, the so-called supporting cell, differs in no respect from the corresponding cells in the buds of the tongue. Its shape varies very greatly, but there are not two types in this cell, one peripheral and one central. The irregularity is due in some degree to fixation. The cells are loosely applied and adjusted to each other, to the taste cells and to the epithelium around, leaving spaces through which leucocytes may wander (Ranvier, 1888). Under fixation they readily shrink and may withdraw from each other, but chiefly as a bud from the epithelial wall from which they may separate at any point. When this shrinkage occurs, the intercellular bridges which pass from the epithelial wall to the supporting cells are easily observed, and without doubt distort the cell wall. While this is so, the general relation of the supporting cell to the taste cell and its general outline in cross section prove that we have to do with a cell which readily adjusts its contour to the adjoining parts. In the center of the bud it appears somewhat triangular, with the fusiform sensory cell applied to the flattened and slightly convex surface; at the periphery there is a similar adjustment of the external surface to the epithelial wall—convexity to concavity. Its general appearance and its mobility of surface suggest a cell protoplasm easily susceptible to external influences. With reference to their functions the authors believe that the hypothesis which assumes that these end organs act as sentinels to assist in the protection of the laryngeal cavity during the passage of food is the most likely one. JELLIFFE.

Neurologisches Centralblatt

(Vol. 24, No. 11, June 1, 1905.)

1. Investigations on the Motor Localization of the Lower Extremity in the Spinal Cord of Man. C. PARHON and M. GOLDSTEIN.
2. The Psychology of Confabulation. A. PICK.

1. *Motor Localization in the Spinal Cord.*—The authors examined the spinal cords of two patients, on one of whom amputation was done for senile gangrene in the middle of the thigh of one limb, and several years after of the knee of the other leg, the patient dying some weeks after. In the other case, because of an osteomyelitis, an amputation was done in the middle of the thigh. The examination of the nerve cells of the spinal cord showed chromophylic changes beginning in the upper portion of the third lumbar segment, and also involving some of the nerve cells of the fourth and fifth segments. These results were compared with those attained by experimental work on the lower animals, and found to correspond with these and also with the work of other authors. The original should be read for details.

(Vol. 24, No. 12, June 16, 1905.)

1. The Return of the Knee Phenomenon in Tabes Dorsalis, Without the Occurrence of Hemiplegia. J. DONATH.
2. The Symptomatology of Delirium Tremens. M. REICHARDT.
3. The Motor Cell Groups in the Cervical Swelling of the Spinal Cord in Man, as a Result of Amputation Cases. L. BLUMENAU.

1. *Knee Jerk in Tabes Dorsalis.*—Donath records a typical case of tabes dorsalis in which twenty-two months after the onset of the typical symptoms, both the patellar and the Achilles jerk reappeared and later became exaggerated. There was apparently no involvement of the lateral columns. He compares this phenomenon with the occasional return of the light reflex in the same disease, and considers that as a result of treatment the reflex arc of these reflexes must have been little diseased and have regained function.

2. *Delirium Tremens.*—Reichardt, following Lippman's interesting experiments, found that by giving a clean sheet of paper to patients who had passed the active stage of delirium tremens these patients would sometimes

inspect all sides of the paper for hours and would describe objects they were seeing. These were not illustrations, but pure hallucinations. These patients would be able to read figures and sentences perfectly, arguing against the peripheral origin of the hallucinations.

3. *Motor Cell Groups in the Cervical Cord.*—Blumenau examined the spinal cord of a soldier who had an amputation of the upper third of one arm, and found the nerve cells of the postero-lateral part of the last four cervical and first thoracic segments diseased. These findings correspond with the experiments made on lower animals.

(Vol. 24, No. 13, July 1, 1905.)

1. Some Rare Forms of Multiple Sclerosis. E. MÜLLER.
2. Disturbances of the Sensibility of the Limbs in Tabes Dorsalis. R. FRIEDLANDER.
3. New Method of Staining the Nerve Cells. W. PASSEK.

1. *Multiple Sclerosis.*—Müller believes that the temporal paling of the discs is the most certain sign of this disease. He describes three rare forms of onset. In the first, there is a sudden loss of vision, either in both eyes or in one after the other, with remission of symptoms. The ophthalmoscope shows temporal paling of the optic discs, with normal form fields and no scotoma. Besides, he considers as an early symptom absence of the abdominal reflex, some inco-ordination of the arms and a Babinski sign. He does not argue with Oppenheim that the abdominal reflex is uncertain, for in an examination of 1,000 soldiers this sign was absent only once. In the second, the disease comes on with a general tired feeling in any limb, but examination will show the above mentioned symptom. In the third, the disease may be ushered in by neuralgic or lancinating pains, either in a sensory distribution or in the limbs.

2. *Tabes Dorsalis.*—The author, in an examination of twenty-seven tabetics, found the first sensory symptom to be that of loss of sense of position, and this was more marked in the distal part of the extremity, and became less proximally. The loss of sense of position was commensurate with the ataxia.

3. *Staining Nerve Cells.*—Continued article.

(Vol. 24, No. 13, July 16, 1905.)

1. Concerning Dementia Paralytica After Injury. G. RHEINHOLD.
2. New Method of Staining Nerve Cells. W. PASSEK.

1. *Dementia Paralytica.*—The traumatic cause of dementia paralytica is not admitted by many. Rheinhold records an interesting case of a man of forty, without alcoholic or specific history, who developed paralytic dementia seventeen months after an injury to the head. The pathological examination showed arterio-sclerotic changes and areas of softening throughout the brain.

2. *Staining Nerve Cells.*—This article is not suited for abstracting.

(Vol. 24, No. 15, Aug. 1, 1905.)

1. With Which Part of the Brain Does Man Think? A. ADAMKIEWITZ.
2. Asthenia Paroxysmalis. M. BORMSTEIN.
3. The Development of Neuro-Fibrils. H. HELD.

1. *Brain Localization.*—Adamkiewitz again advances his well-known views that the function of thinking is performed by all of the cells of the brain cortex. He divides this function into the active and inactive forms. The former is concerned with active thought, the latter he explains or exemplifies by the function of the process of dreams. Special functions, such as seeing, hearing, etc., are, of course, referred to the special centers or the occipital and temporal lobes.

2. *Asthenia Paroxysmalis.*—Continued article.

3. *Neuro-Fibrils.*—Not suited for abstracting.

(Vol. 24, No. 16, Aug. 16, 1905.)

1. The Clinical Interpretation of Confabulation. C. NEISSER.
2. Further Contribution to the Nature of the So-Called Supraorbital Reflex. C. HUDOVERNIG.
3. Asthenia Paroxysmalis. M. BORNSTEIN.

1. *Confabulation.*—In a short article the author publishes a case record to show that falsification of memory is not an unusual symptom of confabulation.

2. *Supraorbital Reflex.*—Hudovernig again revives the old controversy on the supraorbital reflex, and now believes that it is not a true reflex, but a mechanical phenomenon.

3. *Asthenia Paroxysmalis.*—Bornstein reports a very interesting case of a man of fifty-six who, for five years, has complained of periodic weakness of the upper and lower limbs, these attacks lasting about twelve hours, principally occurring at night. Besides there were vasomotor symptoms, as shown by the dryness of the secretions; no disturbances of sensation, slowness of intellect, lowering of the sp. gr. of the urine, a peculiar condition of the blood, and a diminution of faradic excitability. The symptom complex above described resembles most closely the familiar paroxysmal paralysis of Goldflam. The author considers, however, that his case is different from those described by Goldflam, and explains the symptom complex by an affection of the vasomotor center.

(Vol. 24, No. 17, Sept. 1, 1905.)

1. Pseudomelia Parasthetica as a Symptom of Cerebral Affection in the Region of the Lenticular Nucleus. BECHTEREW.
2. The Influence on Menstruation Through Cerebral Focal Disease. MÜLLER.

1. *Pseudomelia Paresthetica.*—Bechterew records a very interesting case in which, through a focal lesion in the right lenticular nucleus, there were present at first convulsions and then paralysis of the left half of the body. There was no disturbance of sensation, but there was loss of muscle sense and considerable atrophy. A curious symptom, to which Bechterew gives the name of pseudomelia paresthetica, was present, which consists in the patient having a false impression that the limb was being moved, although it was at rest.

2. *Menstrual Disturbances in Cerebral Disease.*—Axenfeld, in 1903, first called attention to the disturbances of menstruation occurring in cerebral disease. Bayerthal further wrote upon the subject. Müller, in this paper, records five cases of brain tumor, situated mostly in the posterior cranial fossa, in which amenorrhea was one of the earliest symptoms. He inclines to the view that any tumor involving the pituitary body or the neighboring regions or any tumor of any portion of the brain in which there is an early and large hydrocephalus with rapid diminution of vision may have menstrual disturbances as its earliest symptom. After discussing various theories on this subject, he inclines to the view that the hypophysis may have some influence upon menstrual functions.

(Vol. 24, No. 18, Sept. 16, 1906.)

1. A Painful Point of An Unusual Kind. A. FÜCHS.
2. Contribution to the Pathology of Raynaud's Disease or Symmetrical Gangrene. J. M. BELBOWSKY.
3. Polyneuritis Cerebralis Meniereiformis. A. BERGER.

1. *A Painful Point.*—A man of forty-eight for six years had an intensely painful spot on the front of his chest, which caused agonizing pains by the slightest touch or movement. This was removed, and by microscopic examination it was found to be a gland without an exit point, of an epithelial structure. It is unexplained how such a gland could be found in the skin.

2. *Raynaud's Disease.*—The author records a very well studied case of Raynaud's disease. The findings in brief consist of a diffuse atrophy of nerve fibers throughout the whole spinal cord, an arteriosclerotic condition of the blood vessels, and what he considers an annual degeneration of the white matter throughout the whole cord. The peripheral nerves and roots were also diseased. No interpretation is attempted.

3. *Polyneuritis Cerebralis Meniereiformis.*—Berger calls attention to the symptom complex first described under the above name by Frankl-Hochwart. He gives a brief abstract of all the previously recorded cases, five in number, and adds one of his own. In brief, the symptoms come on acutely with fever, and in all the cases there was an involvement of the facial, acusticus and the sensory portion of the trigeminus. Besides, there were roaring in the ears, deafness, vertigo and some gastric disturbances. The polyneuritic involvement is always unilateral.

(Vol. 24, No. 19, Oct. 1, 1905.)

1. A Contribution to Acute Heart Dilatation. KRESS.
2. Remarks on Asthenia Paroxysmalis of Dr. Bornstein. WESTPHAL.
3. Anatomic-Clinical Contribution to the Study of Cerebral Sensory Disturbances. SCHAFFER.

1. *Heart Dilatation.*—Should be consulted in original.

2. *Asthenia Paroxysmalis.*—A. Westphal calls attention to the fact that his father, C. Westphal, together with Oppenheim, first described the familiar paroxysmal paralysis attributed to Goldflam.

2. *Cerebral Sensory Disturbances.*—In an excellent paper, Schaffer discusses the clinical varieties of cerebral anesthesia and then discusses their pathological and anatomical foundation. Besides the well known forms of anesthesia he describes a new form, a total anesthesia which occurs in diplegia, due to bilateral cortical lesion. He details such a case. He believes that in sub-cortical lesions topoanesthesia, or a form of sensation in which the patient refers sensation to a distant part, may be found, and is quite characteristic of lesions in this area. He agrees with Dejerine and Long, and also with the investigations of Probst, regarding the anatomical distribution of the sensory fibers. He believes, however, that a limited lesion of the internal capsule may cause a persisting hemianesthesia, having reported such a case in which a lesion was found in the anterior part of the internal capsule, assuming that the sensory and motor fibers are not separate in the capsule. A lesion of the posterior part of the capsule will only cause partial disturbance of sensation, for to have complete hemianesthesia the ventrolateral part of the thalamus must be destroyed. A lesion involving the fibers coming to the ventro-lateral nucleus of the thalamus, or of the fibers issuing from the nucleus would also cause permanent hemianesthesia. Either a subcortical lesion or a cortical lesion. which destroyed all of the sensory motor fibers, would, of course, cause permanent hemianesthesia.

(Vol. 26, No. 20, Oct. 16, 1905.)

1. A Contribution to the Pathogenesis of Nevus Vascularis. NÄCKE.
2. The Course of Pyramidal Fibers in the Posterior Columns of Man. BUNCKE.

1. *Nevus Vascularis.*—Näcke discusses the various theories of the causation of nevi, and believes that they are of teratological origin.

2. *The Pyramidal Bundles.*—Buncke details two cases of hemiplegia in which, by the method of Marchi, some degenerated fibers were found in the posterior columns. He considers these as part of the pyramidal bundles. (The cases are by no means clear.)

(Vol. 24, No. 21, Nov. 1, 1905.)

1. Alterations of Muscle Sensibility in Tabes and Other Pathological Conditions, and Concerning the Myosthesiometer. V. BECHTEREW.

2. Sudden Deaths in Tabes. GOLDFLAM.
3. Two Cases of Singultus Crisis in Tabes. STEMBO.
4. Tabes in the Young Person. LASAREW.
5. The Course of Pyramidal Fibers in the Posterior Columns of Man. BUNCKE.

1. *Muscle Sensibility.*—Bechterew considers that disturbance of pressure sense is a constant symptom of early tabes, and that this may be present before evidences of disturbance of sensation.

2. *Death in Tabes.*—Tabes as a rule does not shorten a man's life. Sudden deaths may be due to any cause, principally apoplexy (brain), angina pectoris and aortic aneurysm.

3. *Singultus Crisis in Tabes.*—The author details such a case.

4. *Juvenile Tabes.*—Continued article.

5. *The Pyramidal Bundles.*—Continuation from previous number.

(Vol. 24, No. 22, Nov. 16, 1905.)

1. The Width of the Cortex as a Causal Factor in the Question of the Development of the Brain and the Intelligence. KAES.
2. Tabes in the Young Person. LASAREW.

1. *Width of the Cortex.*—This is a very able article, but not suited to abstracting.

2. *Juvenile Tabes.*—The author has carefully considered all the cases of juvenile tabes reported in the literature, and has rejected all but twenty-three. He adds a case of his own. The diagnosis is often very difficult from Friedreich's disease, cerebrospinal meningitis (syphilitic), and from postero-lateral sclerosis (Oppenheim's case).

(Vol. 24, No. 23, Dec. 1, 1905.)

1. Concerning the Origin of Hallucinations and Illusions. JENDRASSIK.
2. The Bladder Disturbances of Hemiplegia. MÜLLER.
3. Posthemiplegic Movements. FREY.

1. *Hallucinations and Illusions.*—Not abstracted.

2. *Bladder Disturbances.*—Müller has for some years studied cases of hemiplegia for bladder disturbances, and found that in the majority of cases of hemiplegia and of pyramidal disease some disturbances of urination may be present. He does not explain the probable cause.

3. *Post Hemiplegic Movements.*—The author reviews the well-known theories of the causation of such movements, and agrees with von Monakow that they are probably due to a lesion of the optic thalamus in the hvpothalamic region, and he also believes that the thalamus is a co-ordinating center.

(Vol. 24, No. 24, Dec. 16, 1905.)

1. The Secondary Degenerations Following Injury of the First Cervical Root in Man. BUNCKE.
2. The "Streck Phenomenon." SAXL.
3. Autogenous Regeneration of Nerve Fibers. LUGARO.

1. *Injury of First Cervical Root.*—In a case of pontile tumor, the right posterior cervical root of the first segment, was found degenerated. No fibers were found degenerated below this segment. The degeneration was traced upward to the caudate nucleus, and was found to be posterior to the trigeminal fibers, confirming van Gahuchten's experiments.

2. *"Streck Phenomenon."*—Not abstracted.

3. *Nerve Regeneration.*—Lugaro was provoked into discussing regeneration of the sciatic nerve in a case in which Raimann cut the spinal supply, but failed to cut the supply from the obturator and cruralis. Lugario, while not as yet ready to publish his experiments, quotes how he had never found regeneration in cases in which the spinal ganglia, cord and possibly other nerves which may assist in anastomosis had been cut.

WEISENBURG (Philadelphia).